

IN THE CLAIMS:

Please cancel without prejudice claims 32, 41, 61, 62, 80-83 and 87, amend claims 29-31, 33-40, 42-54, 59-60, 63-74, 77-79, 84, 89-90, 93-97, 102-106 and add new claims 107-114 as indicated below.

29. (Amended) An orthopedic attachment assembly, comprising:

- a. an elongated securing member having an enlarged integral portion with a length, a posterior surface and a transverse dimension;
- b. an attachment member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive the securing member, the bore having an anterior bore portion, a posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing member to retain the enlarged integral portion of the securing member within the posterior bore portion; and
- c. a stopping member which reduces a transverse configuration of the bore to define at least in part the posterior bore portion and to retain the enlarged integral portion of the securing member within the posterior bore portion of the attachment member.

30. (Amended) The attachment assembly of claim 29 wherein the stopping member has

a first configuration with inner transverse dimensions that are smaller than the enlarged integral portion of the securing member and
a second configuration with inner transverse dimensions that are greater than the enlarged integral portion of the securing member.

31. (Amended) The attachment assembly of claim 29 wherein the securing member having an enlarged integral portion is slidably disposed within the bore.

32. (Cancelled)

33. (Amended) The attachment assembly of claim 42 wherein the posterior surface of the enlarged integral portion of the securing member is configured at least in part to conform to the posterior surface of the posterior bore portion to facilitate angulation of the securing member within the posterior bore portion.

34. (Amended) The attachment assembly of claim 33 wherein the posterior surface of the posterior bore portion has a bowl shape.

35. (Amended) The attachment assembly of claim 34 wherein the bowl-shaped posterior surface of the posterior bore portion at least in part is a hemispherical zone.

36. (Amended) The attachment assembly of claim 29 wherein the stopping member is a biased stopping member.

37. (Amended) The attachment assembly of claim 36 wherein the biased stopping member is a collar having at least in part a passageway enlargeable from a first inner dimension to a second inner dimension, wherein the enlarged integral portion of the securing member has a maximum dimension greater than the first inner dimension of the collar and less than the second inner dimension of the collar.

38. (Amended) The attachment assembly of claim 37 wherein the bore has a groove which receives the collar.

39. (Amended) The attachment assembly of claim 37 wherein the enlarged integral portion of the securing member has a curved posterior surface which is configured to contact an anterior surface of the collar and expand the collar as the enlarged integral portion of the securing member is displaced posteriorly through the collar passageway.

40. (Amended) The attachment assembly of claim 39 wherein the anterior surface of the collar tapers inwardly toward the collar passageway.

41. (Cancelled)

42. (Amended) The attachment assembly of claim 31 wherein a portion of the securing member posterior to the enlarged integral portion has transverse dimensions sufficiently smaller than the transverse dimensions of the posterior bore portion so the securing member may be angularly displaced within the bore.

43. (Amended) The attachment assembly of claim 29 wherein the attachment member includes at least two bores.

44. (Amended) The attachment assembly of claim 29 wherein the attachment member is configured to conform to and extend between at least two bone segments.

45. (Amended) The attachment assembly of claim 29 wherein the posterior surface of the attachment member is at least in part a concave surface.

46. (Amended) The attachment assembly of claim 29 wherein the attachment member is selected from the group consisting of rods and plates.

47. (Amended) The attachment assembly of claim 31 wherein the securing member is selected from the group consisting of screws and nails.

48. (Amended) The attachment assembly of claim 37 wherein the collar is formed of an elastically deformable material.

49. (Amended) The attachment assembly of claim 37 wherein the collar is formed of a material selected from the group consisting of titanium and superelastic material.

50. (Amended) The attachment assembly of claim 37 wherein the collar has a posterior surface perpendicular to a longitudinal axis of the bore extending through the attachment member.

51. (Amended) The assembly of claim 4 wherein the collar has a height less than the height of the groove.

52. (Amended) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

a) providing

an attachment member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive a securing member with an enlarged integral portion, the bore having an anterior bore portion, and a posterior bore portion with at least one transverse dimension smaller than transverse dimensions of the anterior bore portion, and

a stopping member which reduces a transverse configuration of the bore to retain the enlarged integral portion of the securing member within the posterior bore portion of the attachment member;

- b) positioning the attachment member with at least part of the posterior surface thereof against a surface of the patient's bone;
- c) providing a securing member having an elongated body, and an enlarged integral portion which is at or near one end of the elongated body and which has a maximum dimension greater than the smaller transverse dimension of the posterior bore portion to retain the enlarged integral portion of the securing member within the posterior bore portion; and
- d) attaching the securing member to the patient's bone by advancing the securing member within the bore of the attachment member until the enlarged integral portion of the securing member passes the stopping member and is disposed in the posterior bore portion.

53. (Amended) The method of claim 52 wherein the securing member is angularly displaceable within the posterior bore portion so that the securing member may be secured within the patient's bone at an angle relative to a longitudinal axis of the bore.

54. (Amended) An orthopedic implant assembly, comprising

- a) an attachment member comprising
- an attachment component which has at least one bore configured to receive a securing element with an enlarged head, the bore having a first bore portion, and a second bore portion

- having at least one smaller transverse dimension than
transverse dimensions of the first bore portion;
a stopping surface which reduces a transverse configuration of the
first bore portion to retain the enlarged head of the securing
element within the bore of the attachment member between
the stopping surface and the second bore portion, and
a third bore portion between the stopping surface and the second
bore portion having a surface configured to conform at least
in part to part of the enlarged head of the securing element
received by the bore; and
- b) the securing element having an elongated body and an enlarged
head at one end of the elongated body which has a reversibly
compressed configuration with transverse dimensions less than the
reduced transverse configuration of the first bore portion formed by
the stopping surface and which has an uncompressed configuration
with a transverse dimension greater than the reduced transverse
configuration of the first bore portion and the second bore portion,
so that the head of the securing element is retained within the bore
between the stopping surface and the second bore portion in the
attachment component.

59. (Amended) A method of attaching an orthopedic implant assembly to a
bone of a patient, comprising

- a) providing an attachment member comprising

an attachment component which has at least one bore configured to receive a securing element with an enlarged head, the bore having a first bore portion, and a second bore portion having at least one smaller transverse dimension than transverse dimensions of the first bore portion.

a stopping surface which reduces a transverse configuration of the first bore portion to retain the enlarged head of a securing element within the bore of the attachment member between the stopping surface and the second bore portion;

- b) positioning the attachment member against a surface of the patient's bone;
- c) providing a securing element having an elongated body and an enlarged head at one end of the body which has a reversibly compressed configuration with transverse dimensions less than the reduced transverse configuration of the first bore portion formed by the stopping surface and which has an uncompressed configuration with a transverse dimension greater than the reduced transverse configuration of the second bore portion, so that the head of the securing element is retained within [the bore between the stopping member and] the second bore portion in the attachment component; and
- d) attaching the securing element to the patient's bone by advancing the securing element within the bore of the attachment component until the enlarged head of the securing element is in the second bore portion.

60. (Amended) The attachment assembly of claim 29, wherein

- a. the enlarged integral portion of the elongated securing member has a curved posterior surface; and
- b. the posterior bore portion has a curved posterior surface configured to conform at least in part to part of the curved posterior surface of the enlarged integral portion of the securing member received by the bore.

61. (Cancelled)

62. (Cancelled)

63. (Amended) An orthopedic implant assembly, comprising:

- a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface and the bore having an anterior bore portion and a posterior bore portion which has a posterior opening with a transverse dimension smaller than the transverse dimension of the anterior bore portion;
- b. a stopping member which is at least partially disposed within the bore of the stabilizing element and which defines at least in part a reversibly expandable passageway having a first transverse configuration with a transverse dimension that is smaller than the transverse dimension of the anterior bore portion of the bore of the stabilizing element and a second transverse configuration with a transverse dimension larger than the transverse dimension of the first configuration; and
- c. a securing element configured to be slidably disposed within the bore of the stabilizing element having an elongated body and an enlarged integral portion, the

enlarged integral portion having a maximum transverse dimension greater than the transverse dimension of the first transverse configuration of the stopping member passageway and greater than a transverse dimension of the posterior opening in the posterior bore portion in the stabilizing element, so that the enlarged integral portion of the securing element is retained between the stopping member and the posterior opening in the posterior bore portion and the elongated body having a maximum transverse dimension less than the posterior opening in the posterior bore portion so that the securing element is angularly displaceable within the posterior bore portion of the bore.

64. (Amended) The assembly of claim 63 wherein the stopping member is configured to prevent the back-out of the securing element through the bore of the stabilizing element.

65. (Amended) The assembly of claim 63 wherein the stopping member is biased to the first transverse configuration.

66. (Amended) The assembly of claim 65 wherein the stopping member comprises a biased collar having a passageway therethrough.

67. (Amended) The assembly of claim 63 wherein the enlarged integral portion of the securing element has a curved posterior surface.

68. (Amended) The assembly of claim 66 wherein the bore has a groove in an anterior portion thereof configured to receive the biased collar, and wherein the biased collar is configured to be reversibly expandable when seated in the groove.

69. (Amended) The assembly of claim 68 wherein the curved posterior surface of the enlarged integral portion of the securing element is configured to expand

the collar as the enlarged integral portion of the securing element is displaced posteriorly through the collar passageway.

70. (Amended) The assembly of claim 69 wherein the head of the securing element has a curved posterior surface of the enlarged integral portion of the securing element has a minimum transverse dimension smaller than a transverse dimension of the passageway of the unexpanded collar, and which is configured to contact an anterior surface of the collar and deflect the collar away from a longitudinal axis of the collar passageway as the enlarged integral portion of the securing element is displaced posteriorly through the collar passageway.

71. (Amended) The assembly of claim 70 wherein the collar has an anterior surface which tapers toward the collar passageway.

72. (Amended) The assembly of claim 71 wherein the posterior bore portion has a curved posterior surface that is configured to receive at least in part the curved posterior surface of the enlarged integral portion of the securing element.

73. (Amended) The assembly of claim 63 wherein the enlarged integral portion of the securing element is configured to be longitudinally displaceable within the posterior bore portion of the bore of the stabilizing element.

74. (Amended) The assembly of claim 10 wherein the body of the securing element has a transverse dimension smaller than the second opening of the stabilizing element, and wherein the securing element may be angularly displaced within a posterior portion of the bore of the stabilizing element.

77. (Amended) The assembly of claim 13 wherein the stabilizing element has a concave posterior surface.

78. (Amended) The assembly of claim 10 wherein the stabilizing element is selected from the group consisting of rods and plates.

79. (Amended) The assembly of claim 10 wherein the securing element is selected from the group consisting of screws and nails.

80. (Cancelled)

81. (Cancelled)

82. (Cancelled)

83. (Cancelled)

84. (Amended) An orthopedic implant assembly, comprising:

- a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having an anterior bore portion, a posterior bore portion with a transverse dimension smaller than a transverse dimension of the anterior portion,
- b. a stopping member at the anterior portion of the bore; and
- c. a securing element having an elongated body and a head secured to the body which is reversibly compressible with a compressed transverse dimension less than the transverse dimension of the anterior portion of the bore and with an uncompressed transverse dimension greater than an inner transverse dimension of the stopping member and the posterior portion of the bore, so that the head of the securing element is retained between the stopping member and the smaller transverse dimension of the posterior portion of the bore of the stabilizing element.

87. (Cancelled)

89. (Amended) An orthopedic implant assembly which has a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion, a posterior bore portion having a posterior opening with a transverse dimension smaller than a transverse dimension of the anterior bore portion and which has a securing element having an elongated body and an enlarged integral portion with a maximum transverse dimension greater than a transverse dimension of the posterior opening of the posterior bore portion in the stabilizing element, characterized by:

a resilient radially deflectable member which is configured to engage a surface of the assembly and to retain the enlarged integral portion of the securing element within the posterior bore portion and prevent the back-out of the securing element through the bore of the stabilizing element.

90. (Amended) The assembly of claim 89 wherein the radially deflectable member comprises a biased collar.

93. (Amended) The assembly of claim 91 wherein the biased collar extends at least partially within the bore of the stabilizing element so that the enlarged integral portion of the securing element is retained within the posterior bore portion.

94. (Amended) An orthopedic implant assembly which has a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion, a posterior bore portion having a posterior opening with a transverse dimension smaller than a transverse dimension of the anterior bore portion

and which has a securing element having an elongated body and an enlarged integral head with a maximum transverse dimension greater than a transverse dimension of the posterior opening of the posterior bore portion in the stabilizing element, characterized by:

a resilient longitudinally deflectable member which is configured to engage a surface of the assembly to retain the enlarged integral head of securing element within the posterior bore portion and prevent the back-out of the securing element through the bore of the stabilizing element.

95. (Amended) The orthopedic implant assembly of claim 94 wherein the resilient longitudinally deflectable member is configured to deflect longitudinally when the securing element is advanced posteriorly through the bore of the stabilizing element.

96. (Amended) An orthopedic implant assembly, comprising:

- a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion which has a transverse dimension, a posterior bore portion which has a posterior opening with a transverse dimension smaller than the transverse dimension of the anterior bore portion; and
- b. a biased stopping member which has a first configuration that extends within the at least one bore of the stabilizing element and reduces at least one transverse dimension of the bore and which is elastically deformable to a second configuration that increases the at least one transverse dimension reduced by the biased stopping member in the first

configuration; and

- c. a securing element having an elongated body and an enlarged integral portion which has a maximum transverse dimension greater than the transverse dimension of the bore passageway reduced by the first configuration of the biased stopping member and greater than a transverse dimension of the posterior opening of the posterior bore portion in the stabilizing element, so that the enlarged integral portion of the securing element is retained within the posterior bore portion.

97. (Amended) The orthopedic implant assembly of claim 96 wherein the elastically deformed second configuration of the stopping member facilitates passage of the enlarged integral portion of the securing element by the stopping member.

100. (Amended) The assembly of claim 99 wherein the biased collar is disposed in part within a recess of the stabilizing element.

102. (Amended) The attachment assembly of claim 29, wherein the stopping member is a biased stopping member which reduces a transverse configuration of the anterior bore portion to retain the enlarged integral portion of the securing component within the bore of the attachment member within the posterior bore portion.

103. (Amended) The attachment assembly of claim 102 wherein the biased stopping member is elastically deformable from a first configuration to a second configuration which increases the transverse dimension reduced by the biased stopping member in the first configuration.

104. (Amended) The attachment assembly of claim 103 wherein the biased stopping member is elastically deformed by the passage of the enlarged integral portion of the securing member.

105. (Amended) The attachment assembly of claim 104 wherein the biased stopping member resiliently returns to the first configuration after passage of the enlarged integral portion of the securing member.

106. (Amended) The attachment assembly of claim 31 wherein a posterior surface of the posterior bore portion is configured to conform at least in part to the posterior surface of the enlarged integral portion of the securing member so as to facilitate angular displacement within the posterior bore portion.

107. (New) An orthopedic implant assembly suitable for attachment to a bone which has a stabilizing element having an anterior surface, a posterior surface and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion and a posterior bore portion having a transverse dimension smaller than a transverse dimension of the anterior bore portion, which has a stopping member having a passageway therethrough at an anterior bore portion and which has a securing element having an elongated body and an enlarged integral portion with a maximum transverse dimension greater than a transverse dimension of the posterior bore portion in the stabilizing element, characterized by:

the enlarged portion of the securing element

being at least in part reversibly compressible from a first configuration with a first transverse dimension to a second configuration with a second smaller transverse dimension that is less than the smallest

transverse dimension of the passageway through the stopping member.

the compressible part of the enlarged integral portion of the securing element being biased towards the first configuration,

the enlarged integral portion of the securing element being configured to contact the stopping member so as to compress the compressible part of the enlarged integral portion of the securing element to its compressed configuration as the enlarged integral portion is displaced posteriorly through the stopping member passageway,

whereby the assembly can be attached to the bone with a single motion of advancing the securing element through the stopping member passageway and into the bone.

108. (New) The assembly of claim 107 wherein the compressible part of the enlarged integral portion of the securing element comprises a biased collar.

109. (New) The assembly of claim 108 wherein the biased collar is elastically deformable to the second configuration.

110. (New) The assembly of claim 108 wherein the biased collar extends at least partially within the bore of the stabilizing element so that the enlarged integral portion of the securing element is retained within the posterior bore portion.

111. (New) The assembly of claim 107 wherein the compressible part of the enlarged integral portion of the securing element comprises at least one circumferentially disposed member.

112. (New) The assembly of claim 111 wherein the at least one

circumferentially disposed member has a posterior end secured to the securing element.

113. (New) The assembly of claim 112 wherein the securing element comprises a plurality of circumferentially disposed members having posterior ends secured to the securing element.

114. (New) The orthopedic attachment assembly of claim 29 wherein the posterior bore portion has a length sufficiently greater than the length of the enlarged integral portion of the securing member so that the enlarged integral portion of the securing member is longitudinally displaceable within the posterior bore portion when retained therein.